SCOPE OF WORK

OU2, FORMER NEBRASKA ORDNANCE PLANT, MEAD, NE
TITLE II SERVICES FOR CONTAINMENT REMOVAL ACTION

CONTRACT NO. DACW41-96-D-8014, Task Order #3

July 12, 1996

1 The A-E is requested to provide the following Title II services:

1.1 Review and recommend approval, or disapproval, of the submittals designated GA1 on the submittal register; submittals will be furnished by the construction contractor in accordance with the approved submittal register. Recommendation shall be submitted within ten (10) working days after receipt thereof, unless the Contracting Officer is notified that a longer time will be required and of the reasons therefor.

1.2 Review and provide responses to technical requests for information (RFI).

1.3 Review all Value Engineering Contractor Proposals (VECP) and provide technical comments to the Government.

1.4 Observe the following construction activities:

1.4.1 Installation of piezometers

1.4.2 Extraction well pump installation and connection

1.4.3 Treatment facility equipment installation;

1.4.4 Start-up activities

1.5 Monitor and evaluate the containment system's performance for one year, beginning at the final acceptance of construction.

1.5.1 Capture zone hydrologic monitoring and evaluation.

1.5.1.1 Water level measurements will be collected by the construction contractor as specified in SECTION 01800: SITE OPERATION AND MAINTENANCE. The A-E shall use this water level data in evaluating the performance and effectiveness of the containment system . Criteria for assessing achievement and

maintenance of the required capture zones will consist of comparing measured water levels with simulated drawdown and demonstrating flow toward the extraction wells. Hydrologic monitoring and evaluation described in the Section 2.8.6 of the Design Analysis Report (WCC, 1-96) shall be followed. Theoretical drawdowns shall be calculated using the Theis equation. If remedial design groundwater model construction is completed at the time of evaluation, particle tracking software shall be used in conjunction with Theis equation analytical methods in evaluating containment.

1.5.1.2 Frequency of conducting containment evaluation will be based on the rate which the aquifer responds to pumping. The A-E shall propose a frequency based on drawdown vs time curves.

1.5.1.3 Containment Evaluation Submittals.

1.5.1.3.1 A containment evaluation technical memorandum presenting evaluation and assessment of the containment system shall be prepared semiannually in draft and draft final versions. At a minimum, the containment evaluation report shall contain: a summary of containment well operations and flow rates; water levels measurements in monitoring wells and extraction wells; summary of evaluation methods; comparison of measured drawdown to simulated drawdown/simulated drawdown calculations; output drawings from particle tracking software; groundwater potentiometric drawings showing direction of groundwater movement; analytical results of groundwater quality monitoring from wells specified in this scope of work; conclusions and any recommended changes to containment system operation

1.5.1.3.2 The A-E shall submit Containment System Status Letters to the COE during the first six months of operation. A minimum of three status updates shall be submitted. additional status update letters may be required if modifications to system operation

are required. The containment system status letters shall consist of a brief summary of system operation, pumping rates, and piezometer responses to pumping. Sufficient evaluation shall be completed in order to make recommendations regarding modifications to system operation or containment well pumping rates.

1.5.2 Groundwater Quality Monitoring

1.5.2.1 Purpose. The purpose of groundwater quality monitoring associated with the containment system is to identify the effectiveness of the containment system in preventing the contaminants of concern from migrating downgradient of the containment system at concentrations exceeding cleanup goals. This monitoring will be a supplement to the hydraulic monitoring and evaluation described in paragraph 1.5.1, above.

1.5.2.2 Work Plans. The consultant shall be responsible for preparing a Field Sampling plan for the monitoring activities, in accordance with the requirements detailed in Appendix A of this scope of work. The Quality Assurance Project Plan which has been prepared for the Groundwater Monitoring Program will be used for the Containment Evaluation Program monitoring. The existing Site Safety and Health Plan shall also continue to be used, with amendments if appropriate.

1.5.2.3 Monitoring. Monitor wells shall be sampled and analyzed for the volatile and explosive related contaminants of concern identified in the Feasibility Study, as indicated in the attached table.

1.5.2.4 Reporting. The analytical data resulting from the monitoring program shall be reported in the same format and at the same time as the Groundwater Monitoring Program data. In addition, data, evaluation, conclusions, and recommendations for improvements in the containment system and the monitoring program

shall be addressed in the semiannual Containment Evaluation Reports.

2 Payment for Title II services will be made on a fee schedule basis as follows:

2.1 Shop Drawing Submittals. Payments for Shop Drawing Submittals shall be made in accordance with the partial payment procedures. The negotiated amount for this task shall include an additional fee for review of resubmission of submittals. It is estimated that approximately 25% of the submittals will require a resubmittal.

2.2 Engineering and Design during Construction (EDC). The payment category shall include the necessary design services to support items A.2., A.3., and A.4. above by the A-E's staff. The services may include, not limited to: visits to the site, preparations of design reports, technical review of RFI's and VECP's.

2.2.1 Fee schedule. The A-E shall submit a schedule of hourly rates for the necessary disciplines to be utilized under this category.

2.2.2 Fee Adjustment. Should the services for engineering and design to be performed under this contract require substantially fewer manhours than those allowable under the cost ceiling above for engineering and design during construction or should the Contracting Officer direct the A-E in writing to provide additional manhours of services, the negotiated fee set forth above will be adjusted to reflect such decrease or increase provided that such decrease or increase in fee is based on the manhour rates specified in the contract.

3 A-E RESPONSIBILITY.

3.1 The requirements for work described under paragraphs 1.1 through 1.4 will remain in force until construction and start-up of the containment system has been completed. The Containment Evaluation period shall be one year following the system start-up period, with submittal of reports occurring during and after the evaluation period, as necessary to complete the task.

3.2 The A-E shall respond to all questions submitted by the Corps of Engineers Site Project Office and District Office and document all verbal communications with these offices on a standard office memo to be distributed to the appropriate Site Project and Kansas City District Offices. Any questions to the A-E from the Remedial Action Contractor(s) shall be directed to the Corps of Engineers Offices.

3.3 The A-E shall maintain a daily log of all transaction between their office and the Corps of Engineers. Work (design hours) attributed to the EDC of this contract shall be recorded after each event and forwarded to the Kansas City District Technical Manager on a monthly basis. The KC District Technical Manager shall have the authority to negotiate design hours that are in excess of the design hours considered appropriate for the change.

3.4 The administrative and project management arrangements established under modifications to DACA-41-92-C-0023 for study and design of the containment system shall remain in force for the duration of this task order.

4 Submittals. The following technical submittals are required under this task order:

4.1 Approval/Disapproval (with rationale) Recommendation Letter for each GA1 construction submittal;

4.2 Technical Information in response to RFIs;

4.3 VECP Review comments;

4.4 Observation notes from construction oversight activities;

4.5 Transaction logs;

4.6 Containment Status Letters (3 minimum);

4.7 Containment Evaluation Reports (semiannually), draft and draft final versions.

SCOPE OF WORK

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TITLE II SERVICES FOR CONTAINMENT REMOVAL ACTION

CONTAINMENT EVALUATION MONITORING		
	Analytes	
MW	Spring Event	Fall Event
10A	VOC, EXP	VOC, EXP
10B	VOC, EXP	VOC, EXP
17A	VOC, EXP	VOC, EXP
17B	VOC, EXP	VOC, EXP
17C	VOC, EXP	VOC, EXP
21A	VOC	VOC
36D	VOC	
37A	VOC, EXP	
37B	VOC,EXP	
37D	VOC,EXP	
61A	VOC, EXP	VOC, EXP
61B	VOC	VOC
61D	VOC, EXP	VOC, EXP
62A	VOC, EXP	
62B	VOC, EXP	
62D	VOC, EXP	

SCOPE OF WORK

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APPENDIX A CHEMISTRY REQUIREMENTS

SCOPE OF WORK

OU2, FORMER NEBRASKA ORDNANCE PLANT, MEAD, NE
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AMENDMENT ONE TO SCOPE OF WORK

July 12, 1996

1. PERIOD OF PERFORMANCE. The period for performance of this work shall be the duration necessary to complete the Title II Services and other indicated work, which is judged to extend one year after the final acceptance of the Containment Removal Action construction. This period shall not exceed four years unless a modification to the period of performance is approved by the contracting officer.